IN THE CLAIMS:

Please amend the claims as indicated below: All amendments are without prejudice or disclaimer.

Claims 1-31 (Cancelled)

32. (Currently Amended) A method of continuously producing high grade coke from low grade material without causing a pollution problem, comprising the acts of:

displacing a mixture of low grade non-coking inexpensive coal fines and another type of inexpensive carbonaceous fines comprised of waste coke fine, as a feedstock influent into a pyrolyzer;

pyrolyzing the displaced mixture in the pyrolyzer;

discharging coke and pyrolytic by-products as effluents from the pyrolyzer

wherein quantities of said low grade non-coking inexpensive coal fines and said another type of inexpensive carbonaceous fines is adjusted such that said pyrolytic by-products do not exceed a quantity of pyrolytic by-products required to continuously maintain said method.

33. (Previously Presented) A method according to Claim 32 further comprising the acts of:

feeding back tar effluent by-product from the pyrolyzer to the feedstock influent mixture;

feeding back combustible off-gas effluent by-product from the pyrolyzer to the pyrolyzer and using it as a source of fuel in the pyrolyzer.

34. (Previously Presented) A method according to Claim 32 further comprising the act of obtaining a mixture comprising waste coal fines and waste coke fines prior to the introducing act.

35. (Previously Presented A method according to Claim 32 further comprising the act of low grade coal and/or the carbonaceous waste coke prior to the introducing act, to obtain the fines.

36. (Previously Presented) A method according to Claim 32 further comprising the act of forming the mixture into solid objects prior to the introducing act.

37. (Previously Presented) A method according to Claim 35 wherein the discharging act comprises discharging the coke as solid objects.

38. (Previously Presented) A method according to Claim 33 wherein the first feeding act comprises combining the feedback tar, a synthetic binder and the mixture of fines prior to the introducing act.

39. (Previously Presented) A method according to Claim 33 wherein the by-product tar is fed back mixed with another binder additive and combined with the mixture of coal fines and waste coke fines prior to the introducing act.

40. (Previously Presented) A method according to Claim 32 wherein the discharging act comprises cooling the by-products and condensing tar to separate the tar from off-gas.

41. (Currently amended) A method of producing coke from a mixture of non-prime coal fines and waste coke fines comprising the acts of:
displacing a mixture of low grade coal fines and another type of carbonaceous material comprising waste coke fines as a feedstock influent into a pyrolyzer;
pyrolyzing the mixture in the pyrolyzer;
discharging segregated coke and pyrolytic by-products as effluents from the pyrolyzer
wherein quantities of said low grade coal fines and said another type of carbonaceous material is adjusted such that said pyrolytic by-products do not exceed a quantity of pyrolytic by-products required to continuously maintain said method.

42. (Previously Presented) A method according to Claim 41 further comprising the acts of:

separating the pyrolytic by-products into tar and combustible off-gas;
combining the separated tar as a binder with the mixture of coal and coke fines in the mixture;
returning the combustible off-gas to the pyrolyzer as a source of fuel.

43. (Previously Presented) A method according to Claim 41 wherein the introducing act comprises obtaining a mixture comprising waste coke fines and waste coal fines.

44. (Previously Presented) A method according to Claim 41 further comprising the act of crushing at least some of the coke and/or the coal, prior to the introducing act.

45. (Previously Presented) A method according to Claim 41 further comprising the act of forming the mixture into solid objects prior to the introducing act.

46. (Previously Presented) A method according to Claim 45 wherein the discharging act comprises discharging the coke from the pyrolyzer as solid objects.

47. (Previously Presented) A method according to Claim 42 wherein the combining act comprises combining the separated tar, a synthetic binder and the mixture of coal and coke fines prior to the introducing act.

48. (Previously Presented) A method according to Claim 42 wherein the separated tar is fed back to the coal and coke mixture prior to the introducing act.

49. (Previously Presented) A method according to Claim 42 wherein the separating act comprises cooling the by-products to condense tar to separate the tar from off-gas.

50. (Currently Amended) A method of continuously producing coke from low grade coal and coke fines, comprising the acts of:
obtaining and mixing low grade coal fines and coke fines;
displacing the mixture of lower grade coal fines and waste coke fines as an influent into a

pyrolyzer ~~without drying the fines~~;

pyrolyzing the mixture in the pyrolyzer;

discharging segregated coke and pyrolytic by-products comprising combustible off-gas and tar as effluents from the pyrolyzer;

separating the pyrolytic by-products into segregated tar and combustible off-gas;

adding the segregated tar as a binder to the coal and coke fines mixture;

returning the segregated combustible off-gas to the pyrolyzer as a source of fuel;

wherein quantities of said low grade coal fines and said coke fines is adjusted such that said pyrolytic by-products do not exceed a quantity of pyrolytic by-products required to continuously maintain said method..

51. (Previously Presented) A method according to Claim 50 further comprising the act of crushing oversized waste coke and/or oversized low grade coal, to correctly size the lines.

52. (Previously Presented) A method according to Claim 50 further comprising the act of forming the mixture into solid objects to the introducing act.

53. (Previously Presented) A method according to Claim 52 wherein the discharging act comprises discharging the coke from the pyrolyzer as solid objects.

54. (Previously Presented) A method according to Claim 50 wherein the adding act comprises combining the separated tar, a synthetic binder and the mixture of coal and coke fines prior to the introducing act.

55. (Previously Presented) A method according to Claim 50 wherein the separated tar is fed back to the mixture of coal and coke fines.

56. (Previously Presented) A method according to Claim 50 wherein low grade coal comprises 20-40% by weight of the coal and coke mixture.

57. (Previously Presented) A method according to Claim 50 wherein the coke fines comprise petroleum coke fines which comprise 40-70% by weight of the coal and coke mixture.

58. (Currently amended) A method of producing coke from low grade coal and coke fines, comprising the acts of:
obtaining and mixing low grade coal fines and coke fines;
displacing the mixture of lower grade coal fines and waste coke fines as an influent into a pyrolyzer;
pyrolyzing the mixture in the pyrolyzer;
discharging segregated coke and pyrolytic by-products comprising combustible off-gas and tar; as effluents from the pyrolyzer;
separating the pyrolytic by-products into segregated tar and combustible off-gas;
adding the segregated tar as a binder to the coal and coke fines mixture;
returning the segregated combustible off-gas to the pyrolyzer as a source of fuel;
~~A method according to Claim 50~~ wherein the coke fines comprise coke breeze fines which comprise 5-10% by weight of the coal and coke mixture.

59. (Previously Presented) A method according to Claim 50 wherein the pyrolyzing act comprises heating the introduced mixture to a temperature within the range of 800-1100°C at a rate within the range of 1500-2000°C/hour to lower coke volatility below 2%.

60. (Previously Presented) A method according to Claim 50 wherein the separating act comprises cooling the by-products to about 300°C and condensing the tar to separate the tar from the off-gas.

61. (Currently amended) A method of continuously producing high quality coke from a mixture of low grade and/or waste carbonaceous materials at a much lower cost comprising the acts of:
displacing a mixture of low grade coal fines and waste coke fines as an influent into a pyrolyzer;
pyrolyzing the mixture of fines in the pyrolyzer;

discharging the coke, and pyrolytic by-products from the pyrolyzer

wherein quantities of said low grade coal fines and said waste coke fines is adjusted such that said pyrolytic by-products do not exceed a quantity of by-products required to continuously maintain said method.

62. (Previously Presented) A method according to Claim 61 wherein the by-products comprise tar and combustible gas and further comprising the acts of:

condensing the tar;

using the tar as a binder for the mixture of coal and coke;

using the combustible off-gas as a source of fuel in the pyrolyzer.

63. (Currently amended) A continuous method of producing coke from non-traditional carbonaceous materials comprising the acts of:

displacing a mixture of waste coke fines and non-coking grade coal fines as an influent into a pyrolyzer ;

pyrolyzing the mixture in the pyrolyzer;

discharging the coke, and pyrolytic by-products comprising combustible off-gas and tar as effluents from the pyrolyzer;

reintroducing said tar into said pyrolyzer;

utilizing said combustible off-gas as a fuel to heat said pyrolyzer;

wherein said mixture is formulated such that said pyrolytic by-products do not exceed the quantity of pyrolytic by-products required to maintain said continuous method.

64. (Previously Presented) A method according to Claim 63 comprising the further acts of:

condensing the tar to separate the tar and off-gas;

using the tar as a binder for the mixture fines prior to the mixing act; using the combustible off-gas as a source of fuel in the pyrolyzer.

65. (Previously Presented) A method according to Claim 64 wherein all condensed

tar is utilized as binder and all combustible off-gas is used to fuel the pyrolyzer.

66. (Previously Presented) A method according to Claim 64 wherein the condensed tar is the sole binder source and the combustible off-gas is the sole source of fuel for the pyrolyzer.

67. (Previously presented) A method of cost effectively producing high quality coke from a mixture of non-traditional carbonaceous materials comprising the acts of:

displacing into a pyrolyzer a mixture comprising low grade coal fines and coke fines as salvage from prior production of coke;

pyrolyzing the mixture and obtaining segregated coke and by-products.

68. (Currently amended) A continuous method of producing coke, comprising the acts of:

mixing a binder, low grade non-prime ~~unwashed~~ coal fines selected from the group consisting of waste non-coking coal fines and non-coking coal fines and salvage coke fines selected from the group consisting of waste petroleum fines, waste char fines and waste coke breeze~~, without regard to a free swelling index value~~;

displacing the mixture into a ~~pyrolyze~~ pyrolyzer;

pyrolyzing the mixture to derive coke, tar and combustible off-gas;

wherein the mixture is adjusted during mixing such that upon said pyrolyzing of said mixture an amount of said tar and combustible off-gas derived from said pyrolyzing does not exceed a required amount of said tar and combustible off-gas necessary to maintain said continuous method of producing coke.

69. (Previously Presented) A method according to Claim 68 wherein the method is performed in a closed system and further comprising the acts of:

causing all of the tar to comprise the binder;

fueling the pyrolyzer with the combustible off-gas.

70. (Previously presented) A method of continuously producing high grade coke comprising:

forming a mixture of low grade non-coking coal fines and waste coke fines, as a feedstock influent into a pyrolyzer;

pyrolyzing the mixture in the pyrolyzer;

discharging coke and pyrolytic by-products as effluents from the pyrolyzer; and

introducing said by-products back into said pyrolyzer;

wherein the relative amounts of said coal fines and said waste coke fines are adjusted during the forming of said mixture such that the pyrolytic by-products produced by said pyrolyzing of said mixture are amounts of said by-products required to maintain a continuous operation of said process and said amounts of said by-products do not exceed said amounts required to maintain said continuous operation.

71. (Previously presented ) The method according to Claim 70 wherein said introducing said byproducts back into said mixture comprises:

feeding back tar effluent by-product from the pyrolyzer to the feedstock influent mixture.

72. (Previously presented) The method according to Claim 70 wherein said introducing said byproducts back into said pyrolyzer comprises:

feeding back combustible off-gas effluent by-product from the pyrolyzer to the pyrolyzer and using it as a source of fuel in the pyrolyzer.

73. (Previously presented) A method according to Claim 70 further comprising:

crushing said mixture of low grade coal fines and said waste coke fines prior to pyrolyzing said mixture.

74. (Previously presented) The method according to Claim 70 further comprising forming the mixture into solid objects prior to pyrolyzing said mixture.

75. (Previously presented) The method of Claim 70 said coke is discharged in the

form of solid objects.

76. (Previously presented) The method according to Claim 71 wherein forming said mixture comprises combining the feedback tar, a synthetic binder and the mixture of coal fines and waste coke fines prior to pyrolyzing said mixture.

77. (Previously presented) The method according to Claim 71 wherein the by-product tar is fed back and mixed with another binder additive and subsequently combined with the mixture of coal fines and waste coke fines prior to the pyrolyzation of said mixture.

78.. (Previously presented) The method according to Claim 70 wherein said discharging of said pyrolytic byproducts comprises cooling the by-products and condensing tar to separate the tar from off-gas.